REMARKS

Claims 33-42, 44, 47-55 and 87-102 are all the claims pending in the application.

Claims 42 and 44 have been allowed. See, the Office Action Summary (form PTOL-326) and page 3 of the Office Action. (This was confirmed in a telephone conference with the Examiner.) Claims 42 and 44 were copied from U.S. Patent No. 6,027,766 pursuant to a request for declaration of interference between the present application and the '766 Patent. Claims 42 and 44 of the instant application correspond to Claims 15 and 22 of the '766 Patent.

Thus, the instant application contains two allowed claims that interfere with at least two claims of an issued U.S. patent (the '766 Patent). As such an interference should be declared. MPEP § 2307.02 ("If at least one of the presented claims is not rejectable on any . . . grounds and is claiming the same invention as at least one claim of [a patent], the examiner should proceed to propose an interference.")

On page 4 of the Office Action, the Examiner recognizes Applicant's repeated request for declaration of an interference. It is simply indicated, however, that "[t]he examiner will not stipulate [to the declaration of an interference] at the present time." In the aforementioned telephone conference between the Examiner and the undersigned, the Examiner expressed the view that there is no interfering subject matter.

Applicant respectfully disagrees. An interference should be declared for at least the following reasons.

Claims 42 and 44 of the instant application were identified as corresponding to Claims 15 and 22 of the '766 Patent. See, page 22 of the Preliminary Amendment and Request for Declaration of Interference Under 37 C.F.R. § 1.607 filed September 14, 2000.

As indicated above, Claims 42 and 44 have now been allowed. See, pages 1 (Office Action Summary) and 3 of the Office Action dated October 18, 2004.

Under the rules (37 C.F.R. § 41.203(a) – Interfering Subject Matter), "an interference exists if the subject matter of one party would, if prior art, have anticipated or rendered *prima facie* obvious the subject matter of a claim of the opposing party and vice versa." Claims need not be identical in language or scope for an interference to exist. *Aelony v. Arni*, 547 F.2d 566, 192 USPQ 486 (CCPA 1977).

The interfering subject matter between Claims 42 and 44 of the instant Application and Claim 15 and 22 of the '766 Patent can be appreciated by the following side-by-side comparison of those claims.

Claims 42 and 44 of the '181 Application	**Claims 15 and 22 of the '766 Patent**
42. A method comprising the steps of: providing an article of manufacture having at least one surface; depositing a silica layer by chemical vapor deposition having a thickness of about 339Å over said surface; and	15. A method comprising the steps of: providing an article of manufacture having at least one surface; depositing a sodium ion diffusion barrier layer by a process selected from the group consisting of chemical vapor deposition, magnetron sputtered vacuum deposition (MSVD), and spray pyrolysis having a thickness of at least 100 Å over said surface; and

depositing a photocatalytically-activated self-cleaning coating by chemical vapor deposition over said silica layer whereupon said silica layer inhibits migration of sodium ions from the surface of said article to said photocatalytically-activated self-cleaning coating, wherein the photocatalytically-activated self-cleaning coating is deposited from a precursor gas mixture comprising, by volume percent, 0.7% titanium tetrachloride, 17.2% ethyl acetate, 7.2% oxygen and 74.9% helium, with flow rates of 0.2 liters per minute titanium tetrachloride, 4.8 liters per minute ethyl acetate, 2.0 liters per minute oxygen and 20.9 liters per minute helium, the precursor gas mixture having a temperature above 300°F and below the decomposition temperature of ethyl acetate, the article of manufacture moving at a line speed of 300 inches per minute, and the article having a substrate temperature of 1170°F.	depositing a photocatalytically-activated self-cleaning coating by a process selected from the group consisting of chemical vapor deposition, MSVD, and spray pyrolysis over said sodium ion diffusion barrier layer whereupon said sodium ion diffusion barrier layer inhibits migration of sodium ions from the surface of said article to said photocatalytically-activated self-cleaning coating.
44. The method of claim 42 wherein the article is selected from the group consisting of: glass sheet and continuous glass float ribbon.	22. Method of claim 15 wherein the article is selected from the group consisting of: glass sheet, continuous glass float ribbon, plastic substrate, metal substrate and an enameled substrate.

Both Claims 42 and 15 recite a method including the steps of providing an article of manufacture having one or more surfaces, and depositing a sodium ion diffusion barrier layer (silica layer) by chemical vapor deposition. In Claim 42, the layer has a thickness of about 339Å. In Claim 15, the layer has a thickness of at least 100Å.

Both Claims 42 and 15 recite the additional step of depositing a photocatalytically-activated self-cleaning coating by chemical vapor deposition over the sodium ion diffusion silica

layer whereby this layer inhibits migration of sodium ions from the surface of the article being coated to the photocatalytically-activated self-cleaning coating layer.

Claim 42 further recites the conditions for the deposition of the photocatalytically self-cleaning coating. These are:

> the photocatalytically-activated self-cleaning coating is deposited from a precursor gas mixture comprising, by volume percent, 0.7% titanium tetrachloride, 17.2% ethyl acetate, 7.2% oxygen and 74.9% helium, with flow rates of 0.2 liters per minute titanium tetrachloride, 4.8 liters per minute ethyl acetate, 2.0 liters per minute oxygen and 20.9 liters per minute helium, the precursor gas mixture having a temperature above 300°F and below the decomposition temperature of ethyl acetate, the article of manufacture moving at a line speed of 300 inches per minute, and the article having a substrate temperature of 1170°F.

It will be appreciated then that the deposition step (for the photocatalytically-activated self-cleaning coating) recited in Claim 42 merely identifies a preferred set of conditions for deposition of photocatalytically activated self-cleaning coating. Claim 42 of the instant Application would anticipate Claim 15 of the '766 Patent if the subject matter of Claim 42 was prior art to Claim 15.

Conversely, if the subject matter of Claim 15 of the '766 Patent was prior art to Claim 42, it would render *prima facie* obvious Claim 42. Applicant does not admit that Claim 42 is obvious. Instead, this is solely for purposes of determining whether Claim 42 of the instant

Application and Claim 15 of the '766 Patent satisfy the two-way test for interfering subject matter of 37 C.F.R. § 41.203(a).

This is the case despite that Claims 42 and 15 are of a different scope as discussed above. Claim 42 recites a preferred composition of the precursor gas mixture for the photocatalytically activated self-cleaning coating.

The situation is the same with regard to Claim 44 of the instant Application and Claim 22 of the '766 Patent.

Claim 44 depends from Claim 42 and further defines the article of Claim 42 as a glass sheet or a continuous glass float ribbon. Similarly, Claim 22 depends from Claim 15 and further defines the article of Claim 15 as being either a glass sheet or a continuous glass float ribbon (it may also be either a plastic substrate, metal substrate or an enameled substrate).

For the reasons discussed above, it is submitted that Claim 44 of the instant Application and Claim 22 of the '766 Patent also define interfering subject matter. Claim 44, if prior art, would anticipate the subject matter of Claim 22, and Claim 22, if prior art, would have rendered the subject matter of Claim 44 *prima facie* obvious.

Accordingly, even if one focuses solely on the allowed Claims 42 and 44 of the instant Application, there is interfering subject matter with Claims 15 and 22 of the '766 Patent and an interference should be declared.

Turning now to the rejections contained in the most recent Office Action, Claims 33-41 and 47-55 have again been rejected under 35 U.S.C. § 112, first paragraph, as assertedly failing

to comply with the written description requirement. Claims 100-102 have been included in this rejection.

Applicant again traverses these rejections for the reasons set forth on pages 14-24 of the Rule 111 Amendment filed July 30, 2004.

The specific grounds of this rejection are as follows:

1. In Claim 33, line 10, the term "in the crystalline phase" has been deemed new matter. (It is noted that "the same issues applies to Claims 35, 41, 47, 49, 51, 55, and newly added Claims 100-102.")

2. In Claim 33, line 10, the term "photocatalytically-activated self-cleaning coating" has been deemed new matter. (It is also noted that "the same issues applies to Claims 35, 37, 40-43, 47, 49, 51, 54, 55, and newly added Claims 100-102.")

3. In Claim 47, the limitation "said coating has a photocatalytically-activated self-cleaning reaction rate of at least about 8.1×10^{-3} to 9.1×10^{-3} cm^{-1} min^{-1}" has been deemed new matter. (It is noted that "the same issue applies to Claims 49, 51, 55, and newly added Claims 100-102.")

In response to Applicant's detailed arguments contained on pages 16 through 24 of the Amendment filed July 30, 2004, the Examiner merely indicates that "the applicant's claims as presently written are not commensurate in scope with the examples set forth in the third McCurdy Declaration [and hence] the applicant has not established that the parameters recited necessarily result in the claimed properties."

Applicant again respectfully traverses this rejection.

First, it should be noted that in accordance with the Examiner's suggestion, Claim 42 was amended to recite the parameters of Example 1 and new Claims 100-102 were added to recite the process parameters of Example 7 which is an example of coating float glass with titanium dioxide during manufacture. Accordingly, the question, if any, is whether the claims are commensurate in scope with the examples in the specification, not the McCurdy Declarations.

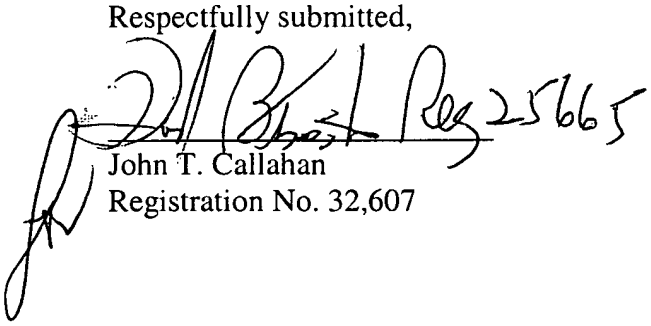
What is clear from the McCurdy Declarations is that it would have been apparent to one having ordinary skill in the art at the time when the instant Application was filed that the processes of Examples 1, 2, 5, and 7 of the instant Application result in a coating that is crystalline and photocatalytically-activated, self-cleaning. Every criticism raised by the Examiner has been addressed by the multiple declarations from Dr. McCurdy. These are annealing properties, substrate purity, substrate crystallinity, processing pressure, and precursor purity.

In view of the foregoing, and in particular the previously submitted Declarations by Dr. McCurdy, Applicant submits that the claimed invention complies with the requirements of Section 112, first paragraph. Accordingly, withdrawal of this rejection is required.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



John T. Callahan
Registration No. 32,607

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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